Listing of Claims:

1. (Currently Amended) An antenna system comprising:

a support structure; and

a multiband/multichannel wireless feeder configured for coupling ~~antennas~~ an antenna located proximate the top of a support structure with electronics located proximate the base of the support structure to overcome losses typically associated with coaxial cables.

2. (Original) The antenna system of claim 1, wherein the multiband/multichannel wireless feeder comprises:

a waveguide having a coupling at each end; and

a multiplexing waveguide network coupled at each end of the waveguide and configured to combine frequencies and applications.

3. (Currently Amended) The antenna system of claim 2, wherein the waveguide is an elliptical waveguide ~~and the antennas are singular polarization antennas~~.

4. (Currently Amended) The antenna system of claim 2, wherein the waveguide is a circular waveguide ~~and the antennas are dual polarization antennas~~.

5. (Currently Amended) The antenna system of claim 2, wherein ~~the~~ a first application is a 3G system and ~~the~~ a second application is a PCS system.

6. (Original) A multiband/multichannel wireless feeder configured for use in an antenna system, the multiband/multichannel wireless feeder comprising:

a waveguide having a coupling at each end; and

a multiplexing waveguide network coupled at each end of the waveguide and configured to combine frequencies and applications.

7. (Original) The multiband/multichannel wireless feeder of claim 6, wherein the waveguide is an elliptical waveguide.

8. (Original) The multiband/multichannel wireless feeder of claim 6, wherein the waveguide is a circular waveguide.

9. (Original) The multiband/multichannel feeder of claim 6, wherein the first application is a 3G system and the second application is a PCS system.

10. (Currently Amended) ~~An~~ A method of transmitting wireless signals between an antenna proximate the top of a support structure and electronics proximate the base of a support structure ~~overcoming losses typically associated with coaxial cables~~, the method comprising:

coupling antennas located proximate the top of a support structure and ~~with~~ electronics located proximate the base of the support structure to respective multiplexing waveguide networks ~~using a multiband/multichannel wireless feeder~~

coupling a flexible waveguide between the respective multiplexing waveguide networks to extend along the support structure.

11. (Original) The method of claim 10, further comprising combining frequencies and applications.

12. (NEW) The antenna system of claim 2 wherein said applications include at least one of a 2G, 2.5G, GRPS, IMT-2000, UMTS, CDMA, W-CDMA, FOMA, CDMA2000 system.

13. (NEW) The antenna system of claim 2 wherein the multiplexing waveguide network includes a multi-frequency waveguide combiner.

14. (NEW) The antenna system of claim 13 wherein the waveguide combiner utilizes a single polarization.

15. (NEW) The antenna system of claim 13 wherein the waveguide combiner utilizes multiple polarizations.

16. (NEW) The antenna system of claim 2 wherein the waveguide is flexible for being curved.

17. (NEW) The multiband/multichannel wireless feeder of claim 6 wherein said applications include at least one of a 2G, 2.5G, GRPS, IMT-2000, UMTS, CDMA, W-CDMA, FOMA, CDMA2000 system.

18. (NEW) The multiband/multichannel wireless feeder of claim 6 wherein the multiplexing waveguide network includes a multi-frequency waveguide combiner.

19. (NEW) The multiband/multichannel wireless feeder of claim 6 wherein the waveguide combiner utilizes a single polarization.

20. (NEW) The multiband/multichannel wireless feeder of claim 6 wherein the waveguide combiner utilizes multiple polarizations.

21. (NEW) The multiband/multichannel wireless feeder of claim 6 wherein the waveguide is flexible for being curved.

22. (NEW) The method of claim 10 wherein the multiplexing waveguide networks are configured to handle multiple different applications.

23. (NEW) The method of claim 22 wherein said applications include at least one of a 2G, 2.5G, GRPS, IMT-2000, UMTS, CDMA, W-CDMA, FOMA, CDMA2000 system.

24. (NEW) The method of claim 10 wherein the multiplexing waveguide networks include a multi-frequency waveguide combiner for handling different frequencies.

25. (NEW) The method of claim 24 wherein the waveguide combiner utilizes a single polarization.

26. (NEW) The method of claim 24 wherein the waveguide combiner utilizes multiple polarizations.

27. (NEW) The method of claim 10, wherein the waveguide is an elliptical waveguide.

28. (NEW) The method of claim 10, wherein the waveguide is a circular waveguide.

29. (NEW) A wireless communication system comprising:

a support structure;

at least one antenna proximate a top of the support structure;

electronics located proximate a base of the support structure;

a multiband/multichannel wireless feeder configured for coupling the antenna with the electronics to overcome losses typically associated with coaxial cables.

30. (NEW) The wireless communication system of claim 29, wherein the multiband/multichannel wireless feeder comprises:

a waveguide having a coupling at each end and extending along the support structure; and

respective multiplexing waveguide networks coupled to each of the antenna and the electronics, the waveguide networks coupled to each end of the waveguide and configured to combine frequencies and applications.

31. (NEW) The wireless communication system of claim 30, wherein the waveguide is an elliptical waveguide.

32. (NEW) The wireless communication system of claim 30, wherein the waveguide is a circular waveguide.

33. (NEW) The wireless communication system of claim 30, wherein a first application is a 3G system and a second application is a PCS system.

34. (NEW) The wireless communication system of claim 30 wherein said applications include at least one of a 2G, 2.5G, GRPS, IMT-2000, UMTS, CDMA, W-CDMA, FOMA, CDMA2000 system.

35. (NEW) The wireless communication system of claim 30 wherein the multiplexing waveguide networks each include a multi-frequency waveguide combiner.

36. (NEW) The wireless communication system of claim 30 wherein the waveguide combiner utilizes a single polarization.

37. (NEW) The wireless communication system of claim 30 wherein the waveguide combiner utilizes multiple polarizations.

38. (NEW The wireless communication system of claim 30 wherein the waveguide is flexible for being curved.